Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for increasing quality of an enhanced output signal to approximate an undistorted sound signal, the method comprising steps of:

receiving a distorted input signal that includes an embedded corrupting signal, wherein the embedded corrupting signal is statistically related to the undistorted sound signal;

~~determining~~ defining an enhancement signal ~~by finding a~~ as the difference between the distorted input signal and the enhanced output signal, whereby the enhancement signal attempts to offset the embedded corrupting signal;

~~analyzing the enhancement signal, whereby the enhancement signal is separately operated upon as a unit; and~~

determining a power of the enhancement signal;

constraining possible values for the power of the enhancement signal based on characteristics of the distorted input signal; and

producing the enhanced output signal, based at least in part upon ~~the analyzing step~~ constrained values of the power of the enhancement signal resulting from the constraining step.

2. (Currently Amended) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 1, wherein [[:]]

~~the analyzing step comprises a step of determining a set of parameters from the enhancement signal, and~~

~~the set includes a~~ the power of the enhancement signal [[,]] is determined over a finite-support window.

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3.   (Cancelled)

4.   (Original) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 2, further comprising a step of increasing periodicity of the distorted input signal.

5.   (Cancelled)

6.   (Original) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 1, further comprising a step of increasing the periodicity of the distorted input signal.

7.   (Currently Amended) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 1, ~~wherein the analyzing step includes~~ **further comprising** a step of feeding-back the enhanced output signal to affect determination of the enhanced output signal.

8.   (Currently Amended) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 1, further comprising additional **defining,** determining, ~~analyzing~~ **constraining** and producing steps to iteratively refine the enhanced output signal.

9.   (Original) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 1, further comprising a step of determining an amount of forward-in-time sample-sequences to use in determining the enhanced output signal.

10.   (Original) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 1, further comprising a step of determining an amount of backward-in-time sample-sequences to use in determining the enhanced output signal.

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11.   (Original) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 1, wherein the embedded corrupting signal is introduced as an artifact of encoding and decoding of the undistorted sound signal.

12.   (Original) A computer-readable medium having computer-executable instructions for performing the computer-implementable method for increasing quality of the enhanced output signal to approximate the undistorted sound signal of claim 1.

13.   (Currently Amended) A method for increasing quality of an enhanced output signal to approximate an undistorted sound signal, the method comprising steps of:

receiving a distorted input signal that includes an embedded corrupting signal, wherein the embedded corrupting signal is statistically related to the undistorted sound signal;

estimating a first iteration enhanced output signal;

~~determining~~ defining a first iteration enhancement signal ~~by finding a~~ as the difference between the distorted input signal and the first iteration enhanced output signal;

~~analyzing the first iteration enhancement output signal; and~~

determining a power of the first iteration enhancement signal;

constraining possible values for the power of the first iteration enhancement signal based on characteristics of the distorted input signal; and

producing a second iteration enhanced output signal, based at least in part upon ~~the analyzing step~~ constrained values of the power of the first iteration enhancement signal resulting from the constraining step.

14.   (Currently Amended) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 13, wherein [[:]]

~~the analyzing step comprises a step of determining a set of parameters from the enhancement signal, and~~

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~~the set includes a~~ **the** power of the enhancement signal [[,]] **is** determined over a finite-support window.

15. (Cancelled)

16. (Original) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 14, further comprising a step of increasing periodicity of the distorted input signal.

17. (Cancelled)

18. (Original) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 13, further comprising a step of increasing periodicity of the distorted input signal.

19. (Currently Amended) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 13, **further comprising a step of** determining an amount of forward-in-time sample-sequences to use in determining the enhanced output signal.

20. (Currently Amended) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 13, **further comprising a step of** determining an amount of backward-in-time sample-sequences to use in determining the enhanced output signal.

21. (Original) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 13, wherein the embedded corrupting signal is introduced as an artifact of encoding and decoding of the undistorted sound signal.

22. (Original) The method for increasing quality of the enhanced output signal to approximate the undistorted sound signal as recited in claim 13, wherein the first iteration

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enhancement signal and the second iteration enhancement signal correspond to a same portion of the undistorted sound signal.

23.   (Original) A computer-readable medium having computer-executable instructions for performing the computer-implementable method for increasing quality of the enhanced output signal to approximate the undistorted sound signal of claim 13.

24.   (Currently Amended) A sound enhancement system that improves a distorted input signal to produce an enhanced output signal where the distorted input signal includes an embedded corrupting signal, wherein the embedded corrupting signal is statistically related to an undistorted sound signal, the sound enhancement system comprising:

an enhancement circuit that receives the distorted input signal and produces a first iteration enhanced output signal, wherein the enhancement circuit ~~determines an~~ :

defines the first iteration enhancement signal ~~that is a~~ as the difference between the first iteration enhanced output signal and the distorted input signal;

determines a power of the first iteration enhancement signal; and

constrains possible values for the power of the first iteration enhancement signal based on characteristics of the distorted input signal,;

a feedback circuit that ~~uses~~ feeds back the first iteration ~~enhanced output signal and the~~ enhancement signal as an improved distorted input signal to effect production of a second iteration enhanced output signal by the enhancement circuit; and

an output circuit that produces the enhanced output signal upon completion of at least one iteration cycle.

25.   (Currently Amended) The sound enhancement system ~~that improves the distorted input signal to produce the enhanced output signal where the distorted input signal includes the embedded corrupting signal introduced as the artifact of encoding and decoding of the undistorted sound signal wherein the embedded corrupting signal is statistically related to the undistorted sound signal~~ as recited in claim 24, wherein [[:]]

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~~a set of parameters is determined from the enhancement signal, and~~

~~the set includes a~~ the power of the **first iteration** enhancement signal [[,]] **is**

determined over a finite-support window.

26.   (Cancelled)

27.   (Currently Amended) The sound enhancement system ~~that improves the~~
~~distorted input signal to produce the enhanced output signal where the distorted input~~
~~signal includes the embedded corrupting signal introduced as the artifact of encoding and~~
~~decoding of the undistorted sound signal wherein the embedded corrupting signal is~~
~~statistically related to the undistorted sound signal~~ as recited in claim 24, wherein the
periodicity of the distorted input signal is increased by the enhancement circuit.

28.   (Currently Amended) The sound enhancement system ~~that improves the~~
~~distorted input signal to produce the enhanced output signal where the distorted input~~
~~signal includes the embedded corrupting signal introduced as the artifact of encoding and~~
~~decoding of the undistorted sound signal wherein the embedded corrupting signal is~~
~~statistically related to the undistorted sound signal~~ as recited in claim 24, wherein the
embedded corrupting signal is introduced as an artifact of encoding and decoding of the
undistorted sound signal.

29.   (Cancelled)